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DISTRICT INSTRUCTIONS TO:  
CEGS-02593

PART 1        GENERAL

REFERENCES

Add:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 471    (1979) Rubber Property-Effect of Liquids

Justification for District change (3078 to CEGS-02576, dated 6  
September 1984 - initiated at the request of AFRCE)

EQUIPMENT - Line 2, After approved add "As a Contractor Quality  
Control Requirement"

Justification for District change (Construction Quality Control)

PART 2        PRODUCTS

PREFORMED SEALS - Add the following to the end of paragraph:

In addition, the joint seal shall conform to the "Method of Test  
for Preformed Polychloroprene Elastomeric Joint Seal  
Jet-Fuel-Resistance" as described in paragraph below.

Justification for District change (3078 to CEGS-02576, dated 6  
September 1984 - initiated at the request of AFRCE)

PART 3        EXECUTION

Conformance to Stretching and Compression Limitations

Line 2 - Replace "as such times as directed." with "by the  
Contractor as a quality control requirement."

Line 10 - Replace "as directed" with "by the Contractor"

Justification for District change (Construction Quality Control)

After paragraph QUALITY CONTROL PROVISIONS add:

## METHOD OF TEST FOR PREFORMED POLYCHLOROPRENE ELASTOMERIC JOINT SEAL JET-FUEL-RESISTANCE

### Scope

This test method provides a procedure for evaluating the ability of preformed polychloroprene elastomeric (PPE) joint seals to withstand the effects of the jet fuel. The effect of fuel is determined by noting the change in weight of the seal before and after immersion in a test fuel.

### Preparation of Specimens

Compliance with the change in weight requirements shall be determined by tests conducted in accordance with the methods specified using specimens cut from manufactured seals. Three specimens shall be tested for each lot or batch of seal submitted for testing. Each specimen shall be rectangular having dimensions of  $60 \pm 1$  mm by  $20 \pm 1$  mm by  $2 \pm 0.1$  mm. Specimens shall be the thickness of the seal as received when they are less than 2 mm thick, otherwise the specimens shall be buffed to a thickness of  $2 \pm 0.1$  mm.

### Test Procedures

Each test specimen shall be weighed to the nearest 0.01 gram and then immersed for  $24 \pm 0.25$  hours in clean test fuel maintained at  $49 \pm 1$  degree C ( $120 \pm 2$  degrees F). The test fuel shall be in accordance with ASTM D 471, reference B test fuel. The specimens shall be suspended in the test fuel so that the bottoms of the test specimen area minimum of 12 mm of test fuel over the tops of the specimens shall be semiclosed to reduce fuel evaporation and eliminate pressure build-up. The overall dimension of the container shall be deep enough to allow the test specimens to be suspended by wire or string and covered with not less than 12 mm of test fuel. Several specimens of the same material may be immersed in the same container provided each test specimen is separated from any adjacent test specimen and container walls by a minimum of 6 mm and the minimum fuel cover is maintained.

A constant temperature water bath shall be used to maintain the

test fuel and specimens at the 49+ 1 degree C (120+2 degrees F) for 24 hours.

Immediately after the 24 hour fuel immersion, the specimens shall be removed from the test fuel and dried in a forced draft oven at 70+1 degree C (158+2 degrees F) for 24 + 0.25 hours. After oven drying, the specimen shall be allowed to cool for 30 minutes at room temperature and then weighed to the nearest 0.01 g. The forced air shall be maintained at an air velocity of 150 to 500 feet per minute.

#### Calculations

The change in weight shall be calculated as follows:

$$\text{Change in Weight, percent} = \frac{W_1 - W_2}{W_1} \times 100$$

where:  $W_1$  = Initial specimen weight

$W_2$  = Final weight after immersion and oven drying

The average of three specimens shall be reported as the percent change in weight.

#### Requirement

When tested as specified herein, the preformed polychloroprene

elastomeric joint seal material shall have an average change in weight on exposure to fuel of 2% or less.

Justification for District change (3078 to CEGS-02576, dated 6 September 1984 - initiated at the request of AFRCE)

NOTE: Plus signs should be read as plus (minus)